REMARKS

Claims 1-8 are pending in the present application; claims 9 and 14-27 were withdrawn from consideration, but have not been canceled.

Reconsideration of the claims is respectfully requested.

35 U.S.C. § 112, First Paragraph (Enablement)

Claims 1-8 were rejected under 35 U.S.C. § 112, first paragraph as failing to comply with the enablement requirement by reciting subject matter that was not described in the specification in such a way as to enable one skilled in the art to make or use the claimed invention. This rejection is respectfully traversed.

The Office Action states:

> In the original specification and figures 1C and 3, capacitive electrodes 136 (fig. 1C) and 302 (fig. 3) are directly connected with another conductive layer 231 (fig. 1C) and 312 (fig. 3), respectively, thereby preventing the capacitive electrode from forming a capacitor because the current from the first conductive layer would flush through the capacitive electrode. This means a capacitor is not formed.

Paper No. 20080606, page 2. Figure 1C of the application depicts multiple capacitive electrodes 136 proximate to a surface 144 of the integrated circuit, and connected by vias 134, metal regions 130 and contacts 128 to either gate electrodes 120 or source/drain active regions 122:

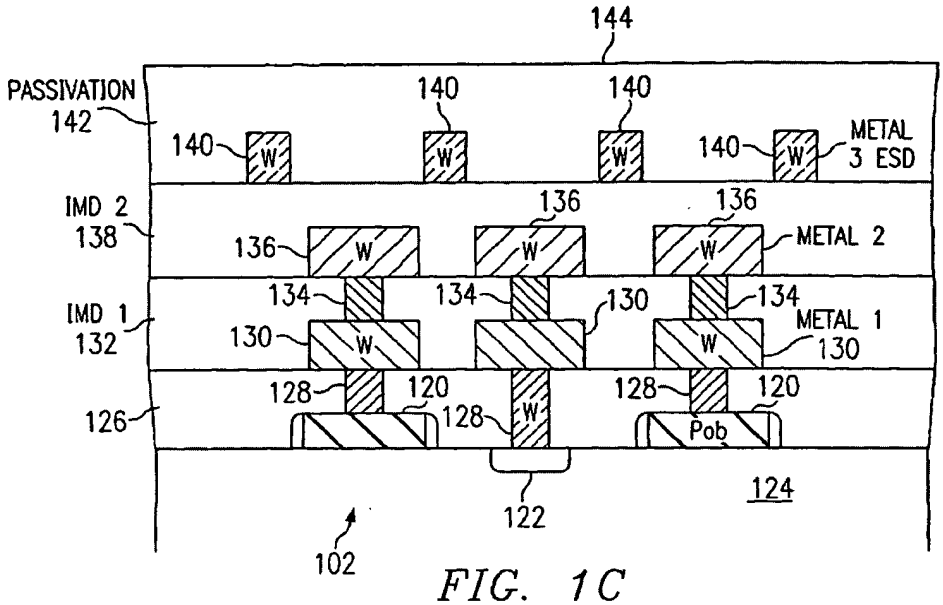

FIG. 1C

As explained in, for example, U.S. Patent No. 6,114,862 (incorporated by reference in the subject application), capacitive electrodes 136 form a capacitor with the finger placed on the surface overlying those electrodes, detecting ridges and valleys on the skin of that finger based on variation in capacitance due to differences in distance between the capacitive electrodes 136 and a ridge or between the capacitive electrodes 136 and a valley:

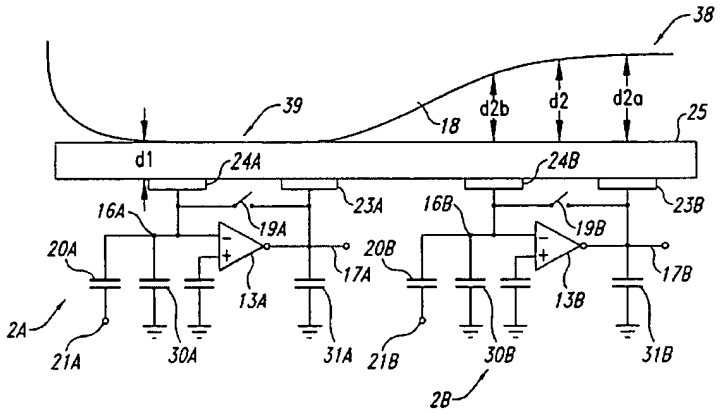

Fig. 4

The operation of the sensor device 1 can be further appreciated with regard to FIG. 4, which is an illustration of the skin surface 18 positioned on first and second adjacent cells 2A, 2B of the sensor device 1. It is to be understood that the present invention will have application to thumbs, palms, and any contact surface where an image is desired. Each of the adjacent cells 2A, 2B is substantially identical to the cell 2 shown in FIGS. 2-3, and thus, additional detailed discussions of the elements of cells 2A, 2B are being omitted for simplicity. . . . . The skin surface 18 shown in FIG. 4 includes a ridge 39 adjacent to the first cell 2A and a valley 38 adjacent to the second cell 2B. As a result, the first and second cells 2A, 2B will each produce different capacitive coupling responses in the sensor device 1. Accordingly, the first cell 2A will sense a smaller distance d1, signifying the ridge 39, than the second cell 2B, which senses a larger distance d2, signifying the valley 38. The distance d2 sensed by the second cell 2B will be the average of a distance d2a between the first capacitor plate 23B and the portion of the skin surface 18 directly above the first capacitor plate 23B and a distance d2b between the second capacitor plate 24B and the portion of the skin surface 18 directly above the second capacitor plate 24B. From a lumped-model point of view, this structure realizes a three-capacitor scheme that can sense the difference between a contacting member, a ridge, and a non-contacting member, a valley.

U.S. Patent No. 6,114,862, Figure 3, column 5, lines 58-67 and column 6, lines 5-21. The electrodes 136 thus each form a capacitor with an object (e.g., a finger) placed on the surface 144 above the electrodes 136. The connection of electrodes 136 to other conductive structures below the electrodes 136 does NOT prevent formation of a capacitor with an object above the

electrodes 136. ALL capacitors within an electrical circuit include an electrical connection from each electrode to other circuit structures.

Therefore, the rejection of claims 1–8 under 35 U.S.C. § 112, first paragraph has been overcome.

35 U.S.C. § 102 (Anticipation)

Claims 1-8 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,852,591 to *Rhodes*. This rejection is respectfully traversed.

A claim is anticipated only if each and every element is found, either expressly or inherently described, in a single prior art reference. The identical invention must be shown in as complete detail as is contained in the claim. MPEP § 2131 at pp. 2100-66 to 2100-67 (8th ed. rev. 7 July 2008).

Independent claim 1 recites a capacitive electrode forming a capacitor with an object placed on the sensing surface proximate to the capacitive electrode. Such a feature is not found in the cited reference. Conductive layer 160 in Rhodes does not form a capacitor with an object placed on the surface of passivation layer 164:

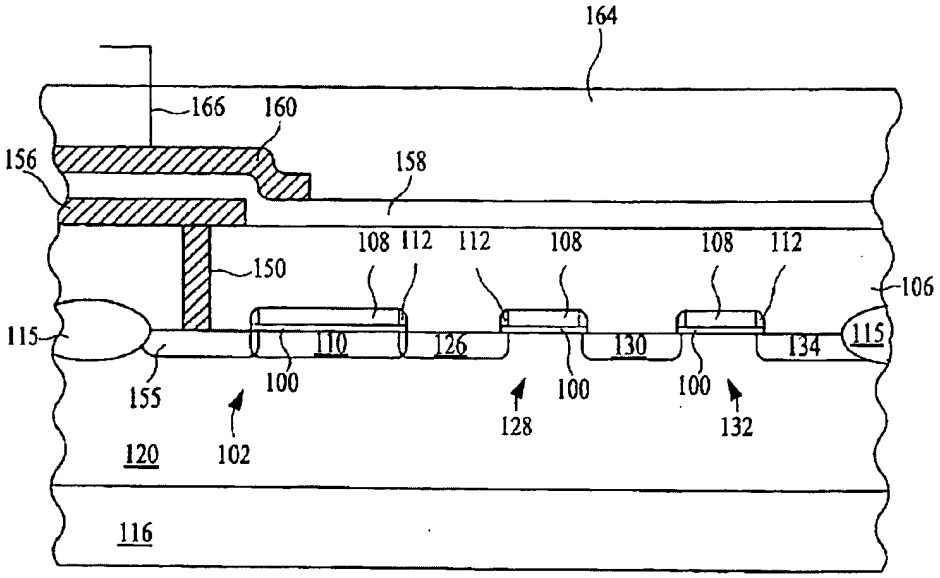

FIG.14

Instead, conductive layer 160 is simply one electrode for a storage capacitor 162 formed by first and second conductive layers 156, 160 and intervening dielectric layer 158, and is connected by metal contact 166 to ground:

> A second conductive layer 160, which forms the second electrode of the capacitor 162, is patterned and formed over the dielectric layer 158 in a method similar to that of the first conductive layer 156. The second conductive layer 160 may be formed of the same or difference conductive materials from those used for the first conductive layer 156. Preferably, both the first and second conductive layers are formed of doped polysilicon with a nitride dielectric layer 158 formed between the two conductive layers 156, 160. A passivation layer 164 is then deposited over the capacitor 162 as shown in FIG. 14. The passivation layer 164 may be any material, such as USG, BPSG, PSG, BSG, provided that the material does not interfere with the collection of light in the photoarea. A hole is etched and a metal contact 166 is formed therein in the passivation layer 164 to connect the second electrode 160 of the capacitor 162 to an electrical circuit, e.g., a ground source potential.

Rhodes, column 10, lines 20–37. Nowhere does *Rhodes* teach that, during operation of the structure disclosed, conductive layer 160 forms a capacitor with an object placed on a proximate

sensing surface. Instead, *Rhodes* teaches that the storage capacitor 162 formed by conductive layers 156, 160 holds collected charge received by conductive layer 156 from nearby photogate transistor 125. *Rhodes*, column 7, line 44 through column 8, line 5.

Independent claim 1 also recites that the capacitive electrode(s) is/are electrically connected to the underlying semiconductor device active region(s). Such a feature is not found in the cited reference. Conductive layer 160 in *Rhodes* is electrically isolated from (albeit capactively coupled to) the underlying conductive structure, including conductive layer 156 and source/drain region 155.

Therefore, the rejection of claims 1–8 under 35 U.S.C. § 102 has been overcome.

If any issues arise, or if the Examiner has any suggestions for expediting allowance of this Application, the Applicant respectfully invites the Examiner to contact the undersigned at the telephone number indicated below or at ***dvenglarik@munckcarter.com***.

The Commissioner is hereby authorized to charge any additional fees connected with this communication (including any extension of time fees) or credit any overpayment to Deposit Account No. 50-0208.

Respectfully submitted,

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